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ABSTRACT

Business officers on campus must be concerned to protect those natural features of the campus and incorporate them into integral parts of the campus. This document presents the environmental program at the University of Utah, consisting of the following elements: (1) Naming a fulltime campus environmental officer. (2) Having the campus designated as an official arboretum. (3) Setting up an administrative system for the establishment of a natural land and water preserve system. (4) Acquiring and maintaining updated copies of all federal, state, and local environmental laws and regulations that relate to the campus. (5) Developing an inventory of all university departments and professors and students doing any active environmental studies and research. (6) Developing an inventory of all community groups that are working in environmental areas to let them know of the campus concerns and programs. (7) Developing on-campus transportation and personnel movement. (8) Establishing acceptable noise-level standards for all university and contractor equipment. (9) Beginning studies aimed at recycling water. (10) Developing energy conservation. (Author/PG)

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"There are not many projects we undertake that do not relat to our total environment . . . good environment is good business."

THE BUSINESS OFFICER AS CAMPUS ENVIRONMENTALIST

By C. Ray Varley

Environmental concern has become a prime factor in the American way of life. Environment has taken its place alongside such words as home, mother, and the church in our society (even replaced these words in the vocabulary of many). The business/finance officer who has as his responsibility the physical facilities of his campus had better begin to acquaint himself with all facets of what he (or she) should do in order to act instead of react to what is already upon him.

Beautification, clean-up, and environmental concerns are not so much specific programs as they are evidences of an attitude: a way of looking at the world in which we work and live—and deeply caring about it. There is room for all in a total campus environment program—faculty, staff, students and community benefiting, and those who desire, participating.

Does Nature Need Man—or vice versa?

In the past, we have thought of man and his environment as separate entities. We talk of nature as if we could take it or leave it, and as if a concern for ecology and the environment were simply a matter of individual choice. Nothing could be further from the truth. Like it or not, man and his environment are inseparable parts of a unified whole. Man is part of the natural world, fully dependent upon its other constituent parts and their interactions. Yet obvious as this seems, the idea of the unity of man and nature is too foreign in our western tradition and our religious training. Our entire culture seems to have taught us that because man is dominant, nature is his servant, that the world (including college campuses) was created for man's exploitation. The consequences of such a philosophy confront us on every hand—from the filth of our rivers to the callous and needless annihilation of other forms of life on earth. This will be no easy tradition to change. Yet change it we must, and we should begin with our campuses.

It is only logical and proper that within our colleges and universities should be built the main catalysts for change. We should be the exemplars of the way environmentally concerned communities should operate. With the combined efforts of faculty technology, student enthusiasm, and administrative support, guidance, and coordination, this can occur. A major goal must be to achieve a harmonious working relationship between man and his environment. I am not suggesting that we turn the whole of our campuses back into a nature preserve. What I do suggest is that we first discover and build an awareness and sincere concern about the environment. We must recognize all forms and kinds of planless, mindless destruction of the environment for what they are—expediencies, often needless. We must begin to consider environmental factors along with economic factors in those things we do on and to our campuses. We should understand both the short- and the long-range environmental effects of every project on the campus. There are not many projects we undertake that do not in some way relate to our total environment.

If we are aware of them, and are concerned, we can protect those natural features that still remain and incorporate them as integral parts of our planning.

Ways are available. Almost every campus has a student ecology action group. Most faculties have active environmentalists. Too often the administration does not utilize the vast energies that groups like these can offer. We must learn to work with them and thus act in concert. Too often though, we are placed in a position of merely reacting to their "demands." One well-known west coast university, within their administrative structure, had thought that they

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were on top of environmental matters. They were concerned, and their architects were concerned, about the preservation of the inherently beautiful site as their campus developed. They failed, however, to include the students in the thinking and planning. Resentment built, and the result was a sit-in on a construction site along with vandalism to the contractor's equipment.

The administration soon put more effort into explaining the what's and why's of all projects to the student body. They now have a campus planning committee with representatives of the faculty and students included. This group makes public campus presentations at least once a quarter on all projects which will have any degree of impact on the campus environment.

Utah's Environmental Program

At the University of Utah, we have been developing a program made up of several parts, to include:

(1) *Naming a full-time campus environmental impact officer whose functions include the preparation of environmental impact statements, liaison with faculty in seeing what areas of research and study in the environment can be applied on the campus, liaison with student groups, liaison with off-campus groups working on this area, and in general being the environmental conscience of the administration and campus.*

This officer has prepared environmental guidelines which are to be incorporated with architectural standards that the university gives to its architects to be used in the design of buildings and other projects. These guidelines deal with such things as wall and window construction standards that bear in mind fuel savings, mechanical systems that will recycle or conserve electrical usage, etc. We found a person to handle this position who was qualified to operate in all the environmental areas necessary, as well as one who had basic experience in the field and could teach various aspects of the subject not only to students, but to teachers.

(2) *Having the campus, all of it, designated as an official arboretum.*

There is a lot of environmental concern evidenced on this 85-year-old campus. Good, original landscape planning resulted in the establishment of great numbers of specimen trees having been planted over the years. Having the state legislature officially proclaim us as the State Arboretum opened up the advantage of forming citizen advisory groups to aid the campus in soliciting outside help (funding) for planting and maintenance. It has the side benefits of drawing "town people" to campus to take self-guided tours of the arboretum and to have meetings here. It has also made our grounds crew aware of their significant contribution to the taking care of something other than "routine" grounds. Almost any campus could not only follow this pattern, but benefit from it.

(3) *Setting up an administrative system for the establishment of a "Natural Land and Water Preserve System," including not only valuable natural lands contributed to the university to be held as preserves and study areas, but also vital parts of the campus proper, thereby declaring that those lands will no longer be considered "fair game" for the type of development that has occurred in the past.*

The goal is to acquire, mainly through donation, parcels of land which will be typical of Utah's natural lands; all the way from desert to river to high mountain. These acreages will be held for research and preservation and in order that future generations might benefit. By using joint faculty-administration teamwork and by encouraging funds for required maintenance and security to accompany the land gift, the out-of-pocket costs to the university can be held to a minimum.

(4) *Acquiring and maintaining updated copies of all federal, state and local environmental laws and regulations which relate to the campus and its environmental impact on the community.*

Clearly define the costs involved and make known to funding agencies as far in advance as possible just what will be required in order for the university to meet or exceed regulations dealing with air quality, water pollution, solid waste disposal, etc. Many of these are mandatory under federal laws. Others are sure to follow, and universities will be wise to plan ahead in order to be on top of the situation, rather than reacting to it when it arrives.

Inventory Town and Grown

(5) *Developing an inventory of all university departments and professors and students doing any active environmental studies and research.*

This list will be most helpful in planning such things as "ecology action week" programs and in making the balance of the campus aware of environmental matters. I consider this to be one of the basic ingredients of an environmental awareness program. If the campus is truly to be the leader in the community in these matters, then we surely must know what is going on in the classroom and lab and see if the campus itself can be the laboratory for such advances. We, for example, utilized such joint thinking to enable us to develop just the right formula for the use of de-icing materials on roads and sidewalks,—one that would do the job, yet neither kill the plants and grass nor ruin the sidewalks.

(6) *Developing an inventory of all groups in the community that are working in environmental areas and let them know of our concerns and programs.*

This type of communication is vital. In that there are all sorts of environmentalists from the "hard core" anti-everything to the garden variety "posy picker" clubs, they must be dealt with and be informed of campus activities

and progress. One thing to be careful of, however, is realizing that there is almost as much contention within certain environmental groups as between them and the anti-environmentalists.

(7) *Developing provisions for effective and efficient methods of on-campus transportation and personnel movements. This would include programs for bicycle, mass transit or shuttle-bus type of movements.*

We have just received a report and recommendation from a student-staff-faculty bicycle committee which has suggested (and the administration concurred) that a request for a $40,000 appropriation be included in a high priority position in our next capital outlay request to the legislature. These funds would implement the report's suggestion for bike facilities. A similar committee is working on problems brought about by the automobile on campus and its first recommendation dealing with car pooling is being implemented this fall.

(8) *Requiring all exposed soil areas to be stabilized to minimize dust blowing.*

Such stabilization need not mean sterilization, oiling or asphalting, but planting low maintenance plants or installing mulches. After the Christmas season last year we obtained free public service announcements on local radio stations which urged citizens to drop their old Christmas trees off on campus where they were run through our shredder and the mulch was then spread on many areas of the campus. This is an attractive yet economical way not only to recycle old trees, but to keep down weeds and dust.

(9) *Establishing acceptable noise-level standards for all university and contractor equipment used on campus, and limiting usage of noisy equipment near classrooms during hours of occupancy.*

This item is often overlooked, but if not taken care of can be a great source of aggravation. There is noise-suppression equipment which is available for every type of equipment. Specifications that are issued to contractors can easily contain a small section which will indicate to them the decibel ratings allowed in the areas on campus where they will be working. Many students and faculty will be appreciative if lawn mowers can be kept away from open windows during class hours. Even with noise-suppressors they are a nuisance.

Start Cycle and Salvage Programs

(10) *Developing a solid waste save and salvage program to utilize the most realistic recyclable materials at the least possible expense.*

Why not try an experiment in newspaper recycling? Take one building, perhaps your administration building, for the test. Ask employees to place all waste newsprint in one area of each office complex each day. Then have custodial people collect these papers at the same time they empty the wastebaskets, keeping the newsprint separate. Then gather all newsprint from the one building in one out of the way place for later moving to a student-built paper recycling shed. The amount of labor required here will depend on the amount collected. Then have a commercial collector pick up the newsprint to be used as insulation or to be recycled as paper. This is but one example of how such things can be started and even pay off economically. Local market price and need for such materials should be checked frequently.

(11) *Developing an ongoing student environmental program whereby their input to the administration about on-campus environmental programs will be encouraged, and acted upon.*

Student governments will usually be most cooperative in such a plan. Here, we used student interns, hired for the summer to take on this project plus other assignments dealing with communication exchange practices between students and the administration.

Research Ultimate Campus Impact

(12) *Beginning studies aimed at recycling water for re-use in landscaping irrigation.*

There are many thousands of gallons of water leaving the campus daily that could be stored and re-used. We have a site that is a natural for such a plan. A large parking lot is in the lowest spot on campus and our stormdrain lines just empty into municipal collection lines. A study is being prepared that will consider the financial feasibility of installing such a water recycling system.

(13) *Developing and implementing energy-conservation and efficiency objectives by establishing minimum design standards in all building and remodeling projects and by starting a "turn it off" program.*

Through a public information program the campus community was told about our power bill, and what they could do to help reduce it. They were informed about which lights should be turned off when they left their offices and which lights should be left on. A utilities manager in Physical Plant worked with large electric users on campus to determine how loads could be reduced. A review of night lighting was made. Some areas were overlit, others under, but a net reduction in power consumption resulted.

(14) *Requiring environmental impact statements on all campus projects and operations to determine what the effect of the project will be on the environment in order that evaluations and/or corrections can be made before a project's beginning.*

These have many positive direct effects but also provide the beneficial side effect of establishing an awareness within all involved on a project as to vital environmental implications. Case in point:

Someone requests one or more window or small unit air

conditioners installed. The average unit uses about 1,000 watts when running. It will, under normal use, average between 150 to 200 KW of electricity per month which is roughly about 500 KW per summer. If the source of electrical generation is coal, then one ton will provide about 2,500 KW. This means that if five window units are installed, then one ton of coal will be required per summer. This ton of coal, if of average quality, will release 12,000 BTU of heat per pound as it is burned. So to cool the five areas we must not only add heat to the atmosphere outside the rooms equal to that removed from the rooms to cool them, but we must also add at the burn and generate location a good part of 12,000 BTU per pound times the 2,000 pounds for the coal, or 24,000,000 BTU's. There is also released with the atmosphere at that point about 140 pounds of ash and probably up to eight pounds of sulphur. All this to move some heat inside some 800 or so square feet to the outside. Each unit will also generate a very uncomfortable noise factor of somewhere between 45 and 75 decibels. The units will also require alterations to the structure, and they usually result in a minus aesthetic value—they are ugly!

A simple air conditioner, then, creates many environmental changes, some close to the unit, others farther away. Whether the sum total of all this is good or bad can be argued, but—the fact that we should be aware of all this when we authorize the installation of window-type air conditioning units cannot be argued with reason.

(15) *Establishing a meaningful, active campus planning committee whose function would be to review all ongoing or planned projects with a charge to look over the aesthetic and environmental aspects of all projects, from parking lots to multi-storied buildings.*

This group should be composed of students, faculty, and staff working alongside of people like the campus architect, physical plant director and environmental impact officer, each serving as a "staff" consultant to the committee.

Just as the life insurance industry recognizes good health as good business, colleges and universities will and must come to recognize that good environment is also good business. Conservation, ecological and aesthetic values should become a respected part of our decision-making process and they should be weighed fully, along with economic and other criteria. I seriously doubt, however, that we can ever put meaningful dollar values on such things as a clean campus, a grove of newly planted trees, a natural spot preserved as such, or the song of a bird. When the adoption of ecological values means added costs, then we should acknowledge this, estimate the costs as accurately as possible and provide our decision-makers with the facts necessary to make intelligent choices from among the available alternatives. Then and only then can they make truly knowledgeable decisions.

Whether we like it or not, we cannot divide and isolate the environment with neat little fences.

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